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Campus Computing News

The End of an Era

New and Improved SkillSoft Online Training Available to Faculty, Staff and Students

Don't forget our monthly Columns!

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The presence of the IBM 360/50 console in front of the podium at his retirement party was a fitting reminder of the incredible breadth of technology Richard A. Harris has presided over in his tenure at the University of North Texas Computing and Information Technology Center (CITC -- formerly the Computing Center). Harris was the first computer programmer at the school then called NTSU. He was hired as a student in 1962 to work on an IBM 1620, which was purchased to support academic users. The 1620 had 20K, which works out to be about 10K bytes as we know it now. The printer was the operator's console, which was an IBM electric typewriter.

In 1963, Harris was appointed Acting Director of Academic Computing, replacing Gene Milner, who left to work for IBM. In 1964 an IBM 1440 was purchased to perform administrative data processing and Richard Harris was appointed Director of Computer Systems. Jerry Waldon (who retired in 1999 from his position as a Systems Programmer/Analyst in IBM Operating Systems Software Support after 34+ years with the UNT Computing Center) was appointed Associate Director of Academic Computing and Coy Hoggard (currently Executive Director of Administrative Information Systems) was hired to be Associate Director of Data Processing. Harris, Hoggard and the IBM 1440 were housed in the basement of the Administration Building.

In 1969, computing personnel consisted of Richard Harris, Director of Computer Systems; Jerry Waldon, Associate Director of Academic Computing, who supervised one secretary/data entry operator and several part time people; Coy Hoggard, Associate Director of Data Processing, who supervised one programmer/analyst, one programmer, one computer operator, one keypunch supervisor, and three keypunch operators. The total operating budget for the Computing Center was $163,738. Fast forward to 2001. That year we planned to spend $931,762 on Oracle software alone, in order to bring up our new Enterprise-wide Information system (EIS)!

As was noted in the invitation to Harris' retirement reception sent out to UNT faculty and staff, not only has Richard been responsible for notable successes in upgrading and improving computing and associated communication systems over the years, he is also the founder and past president of the Texas Association of State Systems for Computing and Communications. He is a founding member of the DFW chapter of the Society for Information Management and he received the very high honor of being selected the 2004 DFW Area Information Technology Executive of the Year. He was recently profiled in SIM News, the online newsletter for the Society for Information Management (SIM).

When Maurice Leatherbury accepted the position of Associate Vice President for Computing and Chief Technology Officer for the Computing and Information Technology Center last year, he agreed to take over, from Harris, the responsibility of managing an organization
with a budget of more than $13 million and a staff of more than 170. Not only that, but CITC provides information technology services for instruction, research and administration throughout the UNT System. A system that includes the Denton campus, UNT Dallas Campus and the UNT Health Science Center. That is a long way from the basement of the Administration Building!**

The end of an era doesn't mean you've seen the last of Richard Harris, though. He will continue to be involved with the University on a part-time basis, serving as Senior Consultant & Wireless Device Specialist (CTO- Retired). He can still be contacted at his E-mail address harris@unt.edu.

* See "The End of an Era was Photographed" in this issue for pictures from Harris' retirement party.

** Now the Hurley Administration Building
New and Improved SkillSoft Online Training Available to Faculty, Staff and Students

By Dr. Elizabeth Hinkle-Turner, Student Computing Services Manager

Yes - at last all the new user accounts and new SkillSoft training is loaded and ready-to-go. So start making your summer training plans now. The delay was due to legal delays in the contract but hey, last year it took until JUNE to get everything sorted out and up-and-running so the situation just keeps improving! (I have really high hopes for a February 2006 update if this trend continues! ;-0 ) Seriously, SkillSoft has never gone away but it DID take awhile to get the new titles loaded and the UNT user accounts all updated.

There have been considerable changes in our SkillSoft offerings due to UNT community input on its training needs and also due to the availability of other (and better) online resources for some of the training. For example, you will find that we no longer have the extensive Adobe training options from SkillSoft. That is because Adobe itself now has extensive and excellent online training at http://www.adobe.com/education. To learn more about this education see the Benchmarks article located at http://www.unt.edu/benchmarks/archives/2005/january05/adobe.htm.

Another development has been the addition of courses in cooperation with Human Resources and also the Information Security team of the Computing and Information Technology Center. Now users will find many courses dealing with accounting compliance, worker management and other helpful HR titles. Persons concerned with technology and security issues will find 18 courses dealing with these problems and their solution. These new HR and security titles are listed at the end of the article.

All you Linux fans will see greatly expanded offerings in basic and advanced Linux administration including an important course in Redhat-type (rpm) and Debian-type (apt) package management which compares and contrasts the procedures used in the distinct distribution systems used in these versions of Linux. Persons involved in the EIS project will want to study Crystal Reports 8.5 and also begin work with the Oracle 10g titles.

The following is a short review of how to get to the SkillSoft training materials. To be authenticated into the computer-based training system first point your browser (remember, SkillSoft unfortunately STILL only works in Windows with Internet Explorer....but they promise me that a cross-platform Firefox version will be available soon!) to https://cbt.acs.unt.edu/logon.htm. Enter your EUID and password:
After you are checked into the system, click on the Login to SkillPort button:

Once you are on the SkillPort website, click on the Catalog name located in the upper-right-hand-corner of the screen to get to the course listings:
New and Improved Skillsoft Online Training Available to Faculty, Staff and Students

Here are the two large categories of courses: Business Skills Curricula where all the Human Resources courses are located and IT Skills Curricula where the information security courses and all other online training is located.
New and Improved Skillsoft Online Training Available to Faculty, Staff and Students

Keep clicking on the course links to get down to the specific courses you need:

Remember - you can use the handy Search-and-Learn site search tool to narrow in on a specific topic you need:
All current members of the UNT main, Dallas, and HSC campuses should be pre-loaded into the system. However, sometimes someone falls through the cracks. If you have trouble logging in for any reason just contact me, the SkillPort administrator, at ehinkle@unt.edu.

Below is a complete listing of the 2005 UNT SkillPort online training catalog. If you have any suggestions for further courses just let me know at the email address given above. Enjoy!

**SkillSoft IT Skills Curricula for UNT:**

*Crystal Reports 8.5: Report Writing Basics*
  - Creating Reports with Crystal Reports

*Linux: Basic System Administration II*
  - Hardware Considerations for Linux Installations
  - Installation and Package Management for Linux
  - Updating the Kernel in Linux

*Linux: Basic System Administration III*
  - Editing and Printing in Linux
  - Shell Scripting in Linux

*Linux: Basic System Administration IV*
  - Networking Fundamentals for Linux Administrators
  - Networking Services in a Linux Environment
  - Security within a Linux Environment

*Linux: System Administration Update I*
New and Improved Skillsoft Online Training Available to Faculty, Staff and Students

- Linux and CLI
- Streams, Pipes, Redirects, and Processes
- Regular Expressions and Text Processing
- File Handling in Linux
- Filesystem Mounting and Management
- Partitions, filesystems, and disk quotas in Linux

*Linux: System Administration Update II
- Hardware Issues for Linux
- Hardware Configurations for Linux
- Linux Installation Techniques
- Debian and Redhat Package Management
- The X Window System

*Linux: System Administration Update III
- Updating the Linux Kernel
- Printing and Documentation in Linux
- Shell Scripting in Linux
- Administrative Tasks in Linux
- Managing Linux group and user accounts
- Automating System Tasks and Backup Strategies

*Oracle Database 10g: New Features I
- Oracle Database 10g: New Installation and Configuration Features
- Oracle Database 10g: New Data Loading Features
- Oracle Database 10g: New Automatic Management Features
- Oracle Database 10g: New Resource, Scheduling, and Task-Management Features
- Oracle Database 10g: New Space Management Features
- Oracle Database 10g: New Storage Features
- Oracle Database 10g: New Tuning, Performance-monitoring, and Analysis Features
- Oracle Database 10g: New Backup and Recovery Features
- Oracle Database 10g: Using Flashback
- Oracle Database 10g: New Features in Security and Software Maintenance
- Oracle Database 10g: New Features in VLDB Support
- Oracle Database 10g: Miscellaneous New Features

*Web Site Design - Principles
- Design Concepts for web sites
- Advanced HTML Design Elements
- Advanced Technology Concepts for Web Designers

*Macromedia ColdFusion MX: Foundation
- Getting Started with ColdFusion MX
- Data Retrieval and Manipulation in Macromedia ColdFusion MX

*Macromedia ColdFusion MX: Experienced
- Working with Complex Data in ColdFusion MX
- Working with Persistent Data in ColdFusion MX
- Creating Reusable ColdFusion MX Code
- Enhancing ColdFusion MX Applications

*Macromedia DreamWeaver MX: Foundation I
- Using Basic DreamWeaver MX Tools
- Structuring Web Pages with Macromedia DreamWeaver MX

*Macromedia DreamWeaver MX: Foundation II
- Using Advanced DreamWeaver MX Tools

*Macromedia DreamWeaver MX for ASP.NET
- Introducing DreamWeaver MX and ASP.NET
- Using DreamWeaver MX to Develop ASP.NET Applications

*Macromedia Fireworks MX: Foundation
- Using Fireworks MX with DreamWeaver MX and Flash MX
- Working with Images in Macromedia Fireworks MX
- Adding Interactive Objects in Macromedia Fireworks MX
*Macromedia Flash MX: Foundation
  • Basic Animation in Macromedia Flash MX
  • Increased Application of Macromedia Flash MX

*Macromedia Flash MX Developer: Action Script: Experienced
  • Using ActionScript in Flash MX
  • Objects, Functions, and Components in Flash MX

*Macromedia Flash MX: Design Techniques; Experienced
  • Basic Design Functionality of Macromedia Flash MX
  • Advanced Design Functionality of Macromedia Flash MX

*GIAC Security Essentials
  • Networking Concepts
  • TCP/IP, Routing and Host Security
  • Network Security Overview
  • Information Warfare and Web Security
  • Internet Security Technologies, Network Vulnerabilities
  • Intrusion Detection and Risk Management
  • Introducing Encryption and Cryptography
  • PKI and Steganography
  • Secure Communications
  • Wireless Security
  • Windows Security
  • Windows XP Security and IIS Security
  • Backing up Windows and UNIX
  • Managing Software, System Services and Auditing
  • UNIX Security

*Net Safety
  • Network Security Issues

*Security Networked Information I
  • Introduction to Security in Networked Environments
  • Encryption Technologies
  • Firewalls and VPNs

*Security Networked Information II
  • Operating System and File Security Issues
  • Intrusion Detection and Response in Networked Environments
  • Security Analysis and Auditing in Networked Environments
  • Securing Access to Networks

SkillSoft Business Skills Curricula for UNT - Human Resources Courseware

  • Workplace Aggression: The Scope of the Problem
  • Change Leadership
  • Business Writing Essentials
  • Managing Your Anger
  • Business Ethics
"Of course we value your experience. I swear, nobody around here refers to you as a 'dinosaur'!"
Internet Issues Illuminated

It was reported today that the Monastery Monk Scribes of Allemagne (MMSA) filed suit against Gutenberg Printing for infringing on their sole right to copy sacred texts. Their argument states that printing with movable type might induce the illegal copying of all sorts of scribable texts and have asked that movable type be ruled illegal. If successful, the MMSA suit could greatly reduce the use of printed materials, and deny bragging rights for some libraries and rare book collectors 500 years in the future.

OK, I made that up. But what would have happened if the producers of the media (scribes) had objected to and suppressed this new way of distributing content? No printed text, no typewriters, no teletypes, no computer text, no e-mail, no Internet, no World Wide Web. On the bright side, Rupert Murdock wouldn't have been able to build his newspaper publishing empire and start up Fox News.

Supreme Arguments

Recently, the Supreme Court of the United States heard arguments about the use of peer-to-peer (p2p) Internet software and the alleged exchange of copyrighted media content. Lower courts have ruled that as in the case of the VCR, the technology cannot be banned just because it has a potential copyright violating use, especially when it can be shown that the technology has demonstrated or potential legal uses.

The group that originally tried to ban the VCR, the Motion Picture Association of America (MPAA) along with its bedfellow, the Recording Industry Association of America (RIAA) are apparently trying to get the "Betamax rule" overturned. Not content with that, the RIAA recently announced that it was suing 25 students at 18 different Internet2-connected Universities. Watch out Gutenberg -- you could be next!

Supreme Hyperbole?

The RIAA all along has claimed that file sharing and Internet downloads have accounted for the drop in sales of Music CDs. A recent study of Canadian music sales seems to negate this argument. The article points out that there may be other reasons why sales, measured in total dollars, may have declined between 1999 and 2004. These include the beginning and rise of DVD sales and less inclination of people to listen to music, in favor of activities like cell phone conversations, video games, watching movies, and surfing the Internet.

This study seems to echo the findings of an earlier one done by researchers at the Harvard Business School and the University of North Carolina. In fact, they found that downloads
actually correlated with increased sales of the most popular songs and that file sharing could not explain the decline in CD sales from 2000 to 2002.

**Supreme Arrogance?**

I find it interesting that the commercial news media seems to have collective amnesia regarding the past actions of RIAA member companies, choosing instead to cast out-of-control college students as the villains in these modern dramas. It was only a few year ago, however, that five major recording companies settled a price-fixing lawsuit with 39 states in the U.S. According to a USA Today Article, "Attorneys general in the two states, who were joined in the lawsuit by 39 other states, said that the industry kept consumer CD prices artificially high between 1995 and 2000. . . ."

When you take away someone's ability to cheat their consumers, lower profits will probably be the result. Combine this with the centralization of radio music programming, and the apparent unwillingness of the major labels to deviate from the cookie cutter formulas that feed that programming, and I think you might have an explanation as to why CD sales have waned. As Shakespeare might have said (if he just could have found a technology to reproduce his works), "the fault, dear labels, is not in your sales, but in your stars."

**Supreme Paradigm Shift**

I think that there's another force in play here which will result in a steady decline in music CD sales regardless of how many people the RIAA sue. People want the convenience of online music. Apple Computer has illustrated that, given the chance, people will buy their music online. They don't want to steal it. The same pattern can't be far behind with video. It's the convenience that people are after, and devices like the iPod mean that you no longer have to carry around the media to enjoy the content. As hard drive sizes increase, you won't need the DVDs to take the movie with you.

Technologies catch on because they are more useful, efficient, or accessible than their predecessor methods. The British Library relates about Gutenberg's printing that "the book had such neat lettering that [Cardinal] Carvajal would be able to read it without his glasses." You can't underestimate the power of convenience. I think the RIAA and MPAA better put on their glasses and read the handwriting on the wall.

**Webliography**

[States settle CD price-fixing case](http://www.unt.edu/benchmarks/archives/2005/april05/netcom.htm)
David Lieberman, USA TODAY

[Compact Disc Minimum Advertised Price Antitrust Litigation Settlement](http://www.unt.edu/benchmarks/archives/2005/april05/netcom.htm)

[CD Sales Not Reduced by File Sharing, Say Researchers at Harvard Business School and University of North Carolina, Chapel Hill](http://www.unt.edu/benchmarks/archives/2005/april05/netcom.htm)

[Supreme Court may redefine file swapping](http://www.unt.edu/benchmarks/archives/2005/april05/netcom.htm)
John Borland, CNET News.com

[Piercing the peer-to-peer myths: an examination of the Canadian experience](http://www.unt.edu/benchmarks/archives/2005/april05/netcom.htm)
Michael Geist, First Monday

[RIAA cracks down on Internet2 file-swapping](http://www.unt.edu/benchmarks/archives/2005/april05/netcom.htm)
John Borland, CNET News.com
Gutenberg's Life - The years of the Bible
British Library
The E.A.G.L.E. Transcript

The E.A.G.L.E. Transcript is a co-curricular transcript program that helps students document their university experiences outside of the classroom. Students may list organization memberships, awards, honors, community service, sports participation and other leadership activities. The transcript itself is an official document verified by the University and makes an excellent supplement to job, graduate school and scholarship applications.

Students should register as early in their academic career as possible. The Eagle Leadership Programs office will make presentations about the E.A.G.L.E. Transcript to classes and/or organizations. They can be contacted at 940-891-6770 University Union, Suite 324.

They also have brochures available, and can provide as many copies as you need. For more information or for registration information, please visit the Center for Student Rights & Responsibilities Eagle Leadership Programs website at [www.unt.edu/csrr](http://www.unt.edu/csrr). Click on "Eagle Leadership Programs" then "Eagle Transcript."
VOTING MEMBERS PRESENT: PHILIP TURNER, ELIZABETH HINKLE-TURNER, JONEEL HARRIS, MARGARET AMBUEHL, SCOTT JOYCE (for CHUCK FULLER), JUDITH ADKISON, RAMU MUTHIAH, DON GROSE, JIM CURRY, CRAIG BERRY (for MAX KAZEMZADEH), ROBERT NIMOCKS, DAWISEE LAM (for CHRISTY CRUTSINGER), BRUCE HUNTER, GUILLERMO OYARCE NON-VOTING MEMBERS PRESENT: MAURICE LEATHERBURY, JOE ADAMO, SUE ELLEN RICHEY (Recording Secretary) VOTING MEMBERS ABSENT: PHILIP BACZEWSKI, LOU ANN BRADLEY, JON NELSON, CENGIZ CAPAN, JOHN PRICE, PATRICK PLUSCHIT, COY HOGGARD, KENN MOFFITT, KATHY SWIGGER, SANDRA TERRELL, ABRAHAM JOHN, DOUG MAINS, BOBBY CARTER RESPONSES:

Robert Nimocks moved for approval of the minutes of the February 15, 2005 meeting and the minutes were approved as distributed.

President’s Staff meeting

Maurice Leatherbury reported that he had attended the President’s Staff meeting. He is continuing to work on the e-records retention procedure, the policy for which was approved at the last President’s Staff meeting. He hopes to have the revised procedure to present to the IRC by the April meeting.

Distributed Computing Support Management Team**

Elizabeth Hinkle-Turner reported for the Distributed Computing Support Management Team that DCSMT has met twice since the last IRC meeting. On February 18, Elizabeth Hinkle-Turner gave a presentation about the offerings on the Adobe website, Education division, and also reported on the Microsoft e-learning titles. These modules are only available to faculty and staff as part of UNT’s agreement. Philip Baczewski reported an e-mail exchange with Joey Saxon, the director of Student Accounting and Cashiering, who had no objections to the use of ID photos and creating a common solution to develop picture capabilities.

Judy Hunter, Willis Library GAL Manager, reported on the Dell printer assessment in this heavy use area. She determined that it is a viable alternative. The lab has seen some issues, but for anyone who prints less, it is a good alternative. When problems were reported the first week, Dell installed a duplex add-on and they have not had problems since. The cost relationship of the 5300N Dell versus the HPxxx printer is the initial cost, which is $1000 cheaper. The most cost efficient factor, however, is that it’s maintenance agreement is $300 per year. The Library is currently paying $630 per month to HP for maintenance. Toners for both printers have the same average cost per copy.
DCSMT met again on March 4. Phillip Brooks and Steve Vocelka discussed the Cypress reporting System that is available to about 300 people on campus to print out the financial reports at the local printer. So far it is available for phone bills and some financial aid reports. Human Resources is getting ready to add some of their reports to this software also. Implementation began 3 months ago. Emails were sent to affected end users along with a document with instructions on installation and use. Some problems were discovered with the rollout, including the lack of ActiveX software on individuals' PCs. A lot of these individuals did not have rights to install software, so the network managers had to be contacted to get the software installed. Paul Hons worked with Phillip Brooks to develop a Zenworks Application to install the needed software. Paul will share this with anyone who would like to use it also.

Keith Cullum, Dell account manager, along with Bill Neiderstaff, Printer Products, Dan Smith, Client Technologist, and Elinor Shaw, Student Computing specialist, presented an overview of Dell's Laptop and Laser Printer product lines. Two separate presentations were done. The first was about Dell printers. Bill made an offer to UNT to find 5 laser printers (preferably HP) that could be sent to Dell, and Dell will give us 5 free printers with the purchase of 5 printers with trade in. A limit of 15 printers was mentioned, but that might be negotiable. The offer ends the end of March 2005.

**Enhanced Learning Planning Group**

Philip Turner reported for the Enhanced Learning Planning Group that in response to questions about the success rate of on-line courses a report had been prepared, copies of which he distributed. He pointed out that the statistics show very similar success rates when comparing on-line courses to on-campus classes. They will continue to collect data on this and after each semester will analyze the statistics in an effort to assist faculty to improve in both areas. The Planning Group plans to discuss the issues Cengiz Capan brought up at the last IRC meeting at their next regularly scheduled meeting.

**EIS Planning Group**

Joneel Harris reported for the EIS Planning Group that the status of the project is about the same as last month. Several people will be attending the Higher Education Users’ Group during the week after Spring Break to try and determine what to expect from the Oracle / PeopleSoft merger. She reported that there is a person assigned to support UNT now and they have made contact with this person. They have spoken with the product development specialist, Harriet Franklin, who is the CRM product developer, and Joneel said she had been encouraging.

**Student Computing Planning Group**

Elizabeth Hinkle-Turner reported for the Student Computing Planning Group that they had received materials from Business Software Associates, which is an educational program called “Define the Line” about the downloading of copyrighted software. She shared the information with General Access Lab Managers and they were favorably impressed so she has ordered bookmarks and handouts from the company which she plans to have distributed at orientations and to put in labs across campus. Elizabeth also reported that SGA plans to set up a link on all computers in labs to enable students to vote in the campus elections. In addition, progress is being made on the improved signage around campus for the general access labs. She reported that orientation schedules have been set up and confirmed, and
that Lab managers have agreed to use P-counter software in all of the labs.

Philip Turner reported that there are a few remaining items that have to be fixed prior to the March 31st deadline for getting WebCT Vista working satisfactorily. WebCT and a working group of Vista users have devoted a great deal of effort to resolving the problems UNT has been experiencing with this product. New load balancers were purchased by CITC in an effort to solve one of the problems, and are being prepared for testing now. Because the testing will most likely not be complete before the March 31st deadline, the deadline for a final decision on this product may have to be extended into April.

LEARN

Maurice Leatherbury reported that following negotiations with the Governor that would result in LEARN receiving 7.5 million dollars, a contract has been signed and now the LEARN staff is working hard to get the state-wide network started. There are some questions about which fiber providers to use but that is not holding up progress toward getting the network up and running.

There being no further business, the meeting adjourned at 3:00 pm.

* For a list of IRC Regular and Ex-officio Members click here.

**DCSMT Minutes can be found here.

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**IRC Meeting Schedule**

The IRC generally meets on the third Tuesday of each month, from 2-4 p.m., in the Administration Building Board Room. From time to time there are planned exceptions to this schedule. All meetings of the IRC, its program groups, and other committees, are open to all faculty, staff, and students.
Stata 9: Stata Reloaded

By Patrick McLeod, Research and Statistical Support Services Consultant

One of the first tasks I performed when I began working in Academic Computing Services as a staff member was packing up all of our Stata 7 stock and shipping it back to Stata Corp in exchange for new Stata 8 merchandise. Stata 8 has served faithfully in the two years since, but as with all things having to do with software, a changing of the guard is upon us. On April 27th, Stata Corp will ship Stata 9 to all who have pre-ordered it and to all GradPlan sites. As a GradPlan Method 3 site, UNT will be receiving our new stock of Stata 9 merchandise (CDs, User Guides and Reference Manuals) early in the last week of April.

What’s New In Stata 9?

The most interesting addition to Stata’s arsenal of statistical tools is Mata, a complete programming language for matrix computations (from http://www.stata.com/stata9/mata.html):

Mata is a full-blown programming language that compiles what you type into byte-code, optimizes it, and executes it fast. Behind the scenes, many of the new features of Stata 9, such as linear mixed models and multinomial probit, were written in Mata. You can use Mata to implement bit systems, or you can use it interactively.

To enter Mata, type `mata` at Stata's dot prompt. To exit, type `end` at Mata's colon prompt:

```
. mata
   mata
   (type end to exit)
   : sqrt(-4)
```

--

Mata supports real and complex numbers, binary and text strings (up to 2,147,483,647 characters long), and, for serious programming problems, even pointers!

Mata uses LAPACK routines for its advanced matrix features, such as Cholesky decomposition, LU decomposition, QR decomposition, SV decomposition, eigenvalues and eigenvectors, and solvers and inverters.

Mata supports matrices that are views onto, not copies of, the data. Say you have loaded a dataset of 200,000 observations and 150 variables, and you need a matrix of 80 of those variables in 180,000 of the observations. Rather than requiring 110 megabytes, Mata needs only 640 bytes.

Everybody knows that matrix languages evaluate matrix expressions, such as \( \mathbf{b} = \mathbf{inv} \mathbf{sym}(\mathbf{X}'\mathbf{X}) \mathbf{X}'y \), and Mata is no exception. Because of Mata's design, however, it is fast enough to work at the element level. Here is Mata's polynomial solver:

```mata
numeric rowvector polysolve(numeric vector y, numeric vector x)
{
    numeric rowvector  res, c, empty
    real scalar        i, j, n
    if (cols(y) != cols(x) | rows(y) != rows(x)) _error(3200)
    if ((n=length(x)) == 0) _error(3200)
    res = (iscomplex(y) | iscomplex(x) ? 0i : 0)
    for (j=1; j<=n; j++) {
        c = (1)
        for (i=1; i<n; i++) {
            c = polymult(c, (-x[i],1) :/ (x[j]-x[i]))
        }
        res = polyadd(res, y[j] :* c)
    }
    while (res[cols(res)]==0) res = res[|1,1 1,cols(res)-1|]
    return(res)
}
```

Much of Mata is written in Mata.

In addition to Mata, there are a slew of .ado additions to Stata’s statistical analyses and some welcome added functionality (my personal favorite is the allowance for multiple .do file editor windows at the same time): Linear mixed models (Two-way models, three-way models, multilevel models, random intercepts, random coefficients), multivariate methods (multidimensional scaling, correspondence analysis, biplots, tetrachoric correlations, procrustean analysis, analysis of proximity matrices), new survey statistics (balanced repeated replications, jackknife variance estimates, multistage designs, poststratification), multinomial probit, probit and tobit with endogenous covariates, zero-truncated Poisson and negative binomial regression, seasonal ARIMA models, stereotype logistic regression, improvements in nonlinear regression estimation, multiple Do-file editors, multiple viewers and tabbed viewing, multiple graph windows, dockable windows, XML support, multiple language label support, and quite a bit more.

For a complete description of the upgrades and additions available in Stata 9, please visit [http://www.stata.com/stata9/](http://www.stata.com/stata9/).
Upgrading from Stata 7, Stata 8 to Stata 9

Unlike the moving goalposts that were the upgrade requirements from Stata 7 to Stata 8, Stata Corp has provided us with some firm guidelines for upgrading to Stata 9. Anyone who has purchased Stata 8 since January 2005 to the present qualifies for a copy of Stata 9 at the level that they purchased Stata 8 (one-year or perpetual, Intercooled or SE) for the difference in the costs of the two products. For example, a perpetual license for Intercooled Stata 8 costs $129. A perpetual license for Intercooled Stata 9 costs $145. Anyone who has purchased a perpetual licensed copy of Stata 8 from January through the current time would qualify for a perpetual licensed copy of Stata 9 for $16.

I am in communication with Stata regarding other questions I have received in the past regarding Stata (discounts for faculty using Stata in classroom instruction, a new network license for Stata 9 and a new network license for Stat/Transfer 8) and will disseminate this information as soon as I receive it.

I am looking forward to working with all of our UNT Stata users at this exciting time in Stata development!

P.S. If I’m around long enough to write a *Benchmarks Online* column called *Stata: Stata Revolutions* for the Stata 10 release and I don’t have a “Ph.D.” after my name (or I am more than a year from having that at the end of my name), someone please kick me out.*

Links

- Stata Corp: [http://www.stata.com/](http://www.stata.com/)
- What are the differences in SE, Intercooled and Small?: [http://www.stata.com/order/options-e.html#difference-sm](http://www.stata.com/order/options-e.html#difference-sm)

* If Stata decides to release Stata 10 next year, please disregard this message.
Apache 2.1 Failings: 
mod_authnz_ldap and mod_authn_file 
Part I

By Shannon Eric Peevey, UNT Central Web Support

Introduction

In this month's article, I want to talk about configuring authentication module fail-over with Apache 2.1's new authentication API. Most people are familiar with Apache 1.3, or 2.0, but have not heard of Apache 2.1, or any of the new features that will be integrated into it. Well, first, Apache 2.1 is the development branch of the Apache web server family, which will become Apache 2.2 the next stable branch of Apache. (Apache 2.0 is the current stable branch for the Apache 2 series). You may be familiar with the major changes that have taken place between Apache 1.3 and Apache 2.0, but you may not be aware that there are also major changes between Apache 2.0 and Apache 2.1. "What changes?", you may ask. The authentication API, of course.

Over the past few years, as Apache 2.0 has been tested around the world, developers became unhappy with the flexibility of the existing 2.0 authentication API, and decided that a major reworking of Apache's authentication internals was in order. This reworking will make it much easier for new authentication mechanisms to be built for Apache. (Great for those of us who have unique authentication schemes which are implemented in any number of languages, (C, PERL, etc.)). This reworking has been a long process, but now it appears as if the developers are feeling that the new code base is stabilizing and an Apache 2.2 release is approaching in the near future. In preparation for the possibility of including Apache 2.2 in the Central Web Supports roadmap for the future, I took some time a few weeks ago to become familiar with the new changes, and test our specific needs for authentication with this new API. The result? Read on and find out...

Apache 2.1: Build

Obtaining the Apache 2.1 source code may seem daunting at first, but I will step you through the process, and show you all of the hidden tricks I learned during my initiation to the newest installment of the world's most popular web server.

First of all, we need to download the source code for Apache 2.1 from Subversion, the versioning tool to which Apache has recently moved all of its project code bases. To do this, you will need a Subversion client, (many of which are found here: 
http://subversion.tigris.org/project_links.html under the "Clients and plugins" heading). I am using Debian, so I simply typed:
# apt-get install svn

Once svn was installed, I then used the svn client to "checkout" the source code with the following command:

```
# svn co http://svn.apache.org/repos/asf/httpd/httpd/trunk httpd-test
```

"co" stands for checkout, and we are simply using the svn client to "checkout" the source code from the URL "http://svn.apache.org/repos/asf/httpd/httpd/trunk" and place it in the directory we specify, (here I placed the code in "httpd-test"). (For more information on Subversion, checkout (;) ) the online book at: http://svnbook.red-bean.com/).

When the source code has finished downloading, change directory into httpd-test, (or whichever directory you specified the source code to download into), and run the command:

```
# ./buildconf
```

Buildconf will check to see if you have the Apache Portable Runtime Library, or apr, and the apr-util packages downloaded into the srclib directory. Since we have not downloaded these packages, you will need to run the following commands from the httpd-test directory:

```
# svn co http://svn.apache.org/repos/asf/apr/apr/trunk srclib/apr
# svn co http://svn.apache.org/repos/asf/apr/apr-util/trunk srclib/apr-util
```

The Apache Portable Runtime Library is the abstraction layer that helps Apache to run on many different platforms, and is a necessary part of the Apache code base. At this juncture, I am not sure if the developers will bundle the apr packages with Apache 2.2, or keep them separate. I'll keep you posted.

Next, run the buildconf script again:

```
# ./buildconf
```

The buildconf script will build our configure file, and now we are ready to configure and compile Apache as we have in the past.

To be consistent with my current Apache 2.0 configuration, I copy my config.nice file from my latest source directory, httpd-2.0.53, to the current directory. This is what my Apache 2.0 config.nice file looks like:

```bash
#!/bin/sh
#
# Created by configure

CFLAGS="-g"; export CFLAGS
"./configure" \\
"--prefix=/usr/local/apache2/" \\
"--enable-headers" \\
"--enable-ssl"
```
"--enable-http" \ 
"--enable-cgi" \ 
"--enable-speling" \ 
"--enable-so" \ 
"--enable-rewrite" \ 
"--enable-proxy" \ 
"--enable-cache" \ 
"--enable-mem-cache" \ 
"--enable-disk-cache" \ 
"--enable-expires" \ 
"--enable-dav" \ 
"--enable-deflate" \ 
"--with-ldap" \ 
"--enable-ldap" \ 
"--enable-auth-ldap" \ 
"$@"

This config.nice from Apache 2.0, will actually work quite nicely with Apache 2.1. The only change that will need to be made, will be to the --enable-auth-ldap line towards the very end, which will need to be changed to --enable-authnz-ldap.

#! /bin/sh
#

# Created by configure

CFLAGS="-g"; export CFLAGS

"./configure" \ 
"--prefix=/usr/local/apache21/" \ 
"--enable-headers" \ 
"--enable-ssl" \ 
"--enable-http" \ 
"--enable-cgi" \ 

"--enable-speling" \
"--enable-so" \
"--enable-rewrite" \
"--enable-proxy" \
"--enable-cache" \
"--enable-mem-cache" \
"--enable-disk-cache" \
"--enable-expires" \
"--enable-dav" \
"--enable-deflate" \
"--with-ldap" \
"--enable-ldap" \
"--enable-authnz-ldap" \
"$@"

Once you have made the changes, save them, and execute the following commands:

# ./config.nice

# make

If Apache compiles successfully, then execute:

# make install

Once Apache is installed into /usr/local/apache21, you can then start Apache to test and see if Apache 2.1 will start successfully.

# /usr/local/apache21/bin/apachectl start

Hit localhost with a web browser, (my choice is usually lynx):

# lynx localhost
And see if you get a default Apache page.

**Conclusion**

Congratulations!! You have just downloaded and installed the development version of Apache. Remember, this is beta software, so there are bound to be bugs in it, (aka don't run this in a production environment).

Next month, we are going to configure Apache 2.1 to use both mod_auth_file, and mod_authnz_ldap to help us to restrict access to our site. Test, have fun, and enjoy!
Short Courses

By Claudia Lynch, Benchmarks Online Editor

The spring Short Courses are winding down, although there are still a few of the stat and research classes available. Surf over to the Short Courses page to see the classes offered and to get registration information. The following courses are still available this semester: New Technologies for Survey Research and R & S-Plus Programming.

Customized Short Courses

Faculty members can request customized short courses from ACS, geared to their class needs. Other groups can request special courses also. Contact ACS for more information (ISB 119, 565-4068, lynch@unt.edu).

Especially for Faculty and Staff Members

In addition to the ACS Short Courses, which are available to students, faculty and staff, staff and faculty members can take courses offered through the Human Resources Department, the Center for Distributed Learning, and the UNT Libraries' Multimedia Development Lab. Additionally, the Center for Continuing Education and Conference Management offers a variety of courses to both UNT and the general community, usually for a small fee.

Mandatory Training on EEO and Sexual Harassment Law

State law requires that all new State employees attend training on equal employment opportunity and sexual harassment law. The law also mandates that employees receive supplemental training every two years.

• This spring, all regular UNT Faculty and Staff are required to complete this supplemental training. Employees who were hired more recently than two years ago will still need to complete the refresher training. Human Resources does not track individual dates of completion, but asks that all employees complete the training every other spring.

• Anyone who hasn't completed the training yet needs to take the training online before April 29, 2005.

• Managers are responsible for allowing employees work time to complete this training and for ensuring that all faculty and staff who report to them have complied before April 29, 2005.
On-line training instructions

1. Go to www.unt.edu/hr/training/
2. Scroll down to Equal Employment Opportunity (EEO) Compliance Training
3. Click on Flash Presentation
4. Review applicable policies
5. Click on EEO Training Flash Presentation
6. Follow steps to complete program
7. Complete acknowledgement form and press submit

If you have questions, please call Human Resources at extension 4246.

EIS Training

Student Records Level I Training

The Registrar's Office will continue to offer EIS Student Records Level I Training throughout the Spring 2005 semester. Please review the training schedule below for available times and dates.

STUDENT RECORDS LEVEL I TRAINING: Level I Student Records Training is a hands-on training session that concentrates on basic view access in EIS. In addition to discussions on basic EIS academic structure the users will view student personal information, FERPA status, residency status, registration eligibility, study lists (schedules), grades, enrollment requests, programs/plans, service indicators (blocks) and print unofficial transcripts. Users will also learn how to search for classes and rooms, view class rosters and look up instructor schedules and view the my.unt.edu student portal.

TO REGISTER: Email Sara Akers at sara@acad.admin.unt.edu with your preferred training time. Please include your EUID, full email address and position at UNT. If you do not know your EUID please go to: https://ams.unt.edu/whatsmyeuid.php

Dates for Level I training in ESSC 152 lab:

- May 4, 2005: 8:30-11:00 a.m.

Electronic Procurement (ePro) Training

As many of you are aware, the electronic procurement (ePro) module of EIS has been implemented. We have discontinued the use of paper requisition forms as of September 1, 2004.

ePro requires training for both the ePro Coordinator (individual performing entry/creation/tracking of the purchasing requisition) and the DeptID and/or the Project Holder (Approver). Computer security will not be established until individuals have completed the required training.

At this time, classes will be conducted at the Research Park, EIS Training Room. Directions given at time of registration. Please note: We reserve the right to cancel or change the training location for class attendance under 3.
Next classes are scheduled for Tuesday 04/05/05 or 04/19/05, note the times below:

**Approvers:**
- 2:00 PM to 3:00 PM,
- 3:00 PM to 4:00 PM,
- 4:00 PM to 5:00 PM

**Coordinators**
- 8:00 AM to 12:00 Noon

Please e-mail Tina Koenig, tinak@unt.edu, indicating the time you plan to attend and for which class.

If you have not submitted an ePro DeptID Holder Information Form or an ePro Coordinators Information Form, please fill the form out on-line and attach it to your email requesting registration. This is necessary in order to establish security for your use of the system.

**GroupWise Training**

Information about GroupWise training can be found at the GroupWise course site.

**Basic GroupWise 6.5 Class 3**

In this third and last class for GroupWise this year we will briefly review important topics from the first two classes which include:

- Proxy
- Auto-archiving
- Rules
- JunkMail Handling

In addition to these topics we will also look at the calendar, address books, saving email as MS Word files, setting default fonts for messaging, the multi-user calendar, busy searching, auto-dating appointments, the Contacts folder, and a primer on Document Management.

Jason Gutierrez, the instructor, will also entertain any questions on any GroupWise topic. If there is something that you missed or would like to go over from the first two classes, please come. There is no prerequisite for this class.

If you couldn't make it to the first two classes then this is your chance, please come. There is no registration for this class and seating is limited to the first 20 participants.

This class will be held from 10-11:50 a.m. April 20th and 21st in ESSC Room 152. The same material is offered on both days, please only plan to come to one class (not both). Seating and materials are available to the first 20 people who arrive, so please plan on getting there early.

**GroupWise 6.5 Seminars**
If you would like to have a Basic GroupWise seminar for your area, please contact Jason Gutierrez, Network Computing Services, jasong@unt.edu.

Center for Distributed Learning

The Center for Distributed Learning offers courses especially for Faculty Members. A list of topics and further information can be found at http://www.unt.edu/cdl/training_events/index.htm

The center also offers a "Brown Bag" series which meets for lunch the first Thursday of each month at Noon in Chilton 245. The purpose of this group is to bring faculty members together to share their experiences with distributed learning. One demonstration will be made at each meeting by a faculty member with experience in distributed learning. More information on these activities can be found at the Center for Distributed Learning Website.

Technical Training

Technical Training for campus network managers is available, from time to time, through the Network Computing Services (NCS) division of the Computing and Information Technology Center. Check the NCS site to see if and when they are offering any training.

UNT Mini-Courses

There are a variety of courses offered, for a fee, to UNT faculty, staff and students as well as the general public. For additional information surf over to http://www.pware.com/index.cfm?clientid=2694a

Alternate Forms of Training

Many of the General Access Labs around campus have tutorials installed on their computers. The Training Web site has all sorts of information about alternate forms of training. Computer Based Training (CBT) is one of the alternatives offered.

For further information on CBT at UNT, see the article New and Improved SkillSoft Online Training Available to Faculty, Staff and Students in this issue of Benchmarks Online. Additionally, consult the articles New and Improved Microsoft Elearning Titles Available to Faculty and Staff in the February issue of Benchmarks Online and Computer-based Training Curriculum Update in the January, 2005 issue.

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Transitions

New Employees:

- **Tom McElwee** has been appointed the new CITC director of Enterprise Systems Technical Services. Tom has sixteen years of experience at American Airlines where he was responsible for global information systems in cargo operations. Prior to that, his American experience included project management practices, implementation of a new pension system, and a new flexible benefits system. Earlier in his career, he was with USX (formerly U.S. Steel) where he was responsible for Human Resources Management Systems and has extensive experience in operations.

- **Yancey Yeargan** has joined the Network Computing Services team. He will replace Travis Brown as manager of the EUID / LDAP / Identity Management project. He will also back up Bahram Paiani, who manages the Iatro Virus Gateway, Mailhost and Listserv. Yancey has served the University since 1994, in the College of Arts and Sciences and the College of Engineering.

Awards, Recognition, Publications, etc.

On April 16, **Dr. Elizabeth Hinkle-Turner**, Student Computing Services Manager, gave the paper: *Hear Me Now: the implication and significance of the female composer's voice as sound source in her electroacoustic music - this is not a piece of feminist music theory?* at the annual conference for the Society for Electroacoustic Music in the United States at Ball State University in Muncie, IN.

Hinkle-Turner was also elected to the board of the International Alliance for Women in Music. She serves as the web master and listserv coordinator for this organization.

**Soaring Eagle**

**Jason Emanuel**, Computer Systems Manager, UNIX Systems Team, was seen soaring in the April 2005 issue of the Human Resources Newsletter. He "went out of his way to help a co-worker complete a project."
Don't Forget Our Monthly Columns!

By Claudia Lynch, Benchmarks Online Editor

In addition to our feature articles, Benchmarks Online publishes monthly columns that are focused on specific aspects of computing here at UNT (and beyond, in some cases). Check out what is waiting for you this month:

- **RSS Matters** - "RSS Matters" is the monthly column written by the Research and Statistical Support Group in Academic Computing Services. Their articles focus on topics of a statistical and/or research methods nature. *This month, Patrick McLeod fills you in on the latest release of Stata in his article "Stata 9: Stata Reloaded"*

- **The Network Connection** - "The Network Connection" may well be the longest running column in computer publishing history. Certainly in University of North Texas computer publishing history. *This month Dr. Baczewski sheds light on a number of things in his article "Internet Issues Illuminated ."*

- **Link of the Month** - As it says on the top of the "Link of the Month" page, "each month we highlight an Internet, USENET Special Interest Group (SIG), or similar mailing list(s) or Website(s)." Lately we have been confining ourselves to featuring UNT specific sites. *This month’s feature is The E.A.G.L.E. Transcript .*

- **WWW@UNT.EDU** - "WWW@UNT.EDU" is a monthly column written by the Central Web Support Group in Academic Computing Services. The topics usually focus, in some way, on World-Wide-Web-related issues. *This month, Shannon Peevey begins a multi-part series on Apache 2.1. Part I is called "Apache 2.1 Failings: mod_authnz_ldap and mod_auth_file."*

- **Short Courses** - Every semester, Academic Computing Services (ACS) offers short courses on computer-related topics, many of them having to do with statistical research. This column keeps you up-to-date on what is being offered and when as well as other training opportunities. *Spring Short Courses continue. There is also an item about "Mandatory Training on EEO and Sexual Harassment Law." State law requires that all new State employees attend training on equal employment opportunity and sexual harassment law. The law also mandates that employees receive supplemental training every two years.*

- **IRC News** - As their Webpage says, "the IRC is an advisory and oversight body created to foster communication and cooperation between and
among UNT information resources providers and users." We publish the minutes of the IRC meetings each month, when they are available. The March 8, 2005 minutes are published this month.

- **Staff Activities** - This column focuses on new employees, people who are no longer employed at the Computing and Information Technology Center, awards and recognitions and other items of interest featured here.